

537. 728

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
8 July 2004 (08.07.2004)

PCT

(10) International Publication Number  
**WO 2004/056921 A1**

(51) International Patent Classification<sup>7</sup>: **C08L 23/04**,  
C08F 297/08

Hopfenstrasse 6, 65520 Bad Camberg (DE). MANTEL,  
Rainer [DE/DE]; Augustaanlage 26, 68165 Mannheim  
(DE).

(21) International Application Number:  
PCT/EP2003/013868

(22) International Filing Date: 6 December 2003 (06.12.2003)

(25) Filing Language: English

(26) Publication Language: English

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU,  
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,  
CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,  
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,  
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,  
MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC,  
SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA,  
UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(30) Priority Data:  
102 59 491.0 19 December 2002 (19.12.2002) DE  
60/444,596 3 February 2003 (03.02.2003) US  
103 25 483.8 4 June 2003 (04.06.2003) DE

(84) Designated States (*regional*): ARIPO patent (BW, GH,  
GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),  
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,  
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE,  
SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA,  
GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(71) Applicant (*for all designated States except US*): BASELL  
POLYOLEFINE GMBH [DE/DE]; Brühler Strasse,  
50389 Wesseling (DE).

Published:  
— with international search report

(72) Inventors; and  
(75) Inventors/Applicants (*for US only*): BERTHOLD,  
Joachim [DE/DE]; Am Flachsland 54, 65779 Kelkheim  
(DE). BÖHM, Ludwig [DE/DE]; Leonhardstrasse 36,  
65795 Hattersheim (DE). KRÜMPPEL, Peter [DE/DE];

*For two-letter codes and other abbreviations, refer to the "Guid-  
ance Notes on Codes and Abbreviations" appearing at the begin-  
ning of each regular issue of the PCT Gazette.*

(54) Title: POLYETHYLENE BLOW MOLDING COMPOSITION FOR PRODUCING SMALL CONTAINERS

(57) Abstract: The invention relates to a polyethylene composition with multi-modal molecular mass distribution, which is particularly suitable for blow molding of small containers with a volume in the range of from 200 to 5000 cm<sup>3</sup> (= ml). The composition has a density in the range of from 0.955 to 0.960 g/cm<sup>3</sup> at 23 °C and an MFR<sub>190/5</sub> in the range from 0.8 to 1.6 dg/min. It comprises from 45 to 55 % by weight of a low-molecular-mass ethylene homopolymer A, from 20 to 35 % by weight of a high-molecular-mass copolymer B made from ethylene and from another 1-olefin having from 4 to 8 carbon atoms, and from 20 to 30 % by weight of an ultrahigh-molecular-mass ethylene copolymer C.

WO 2004/056921 A1